

pyrazol-1-yl)methyl]propyl 2-oxo-3-[(2-pyridinylsulfonyl)amino]propylcarbamate), which are useful as cathepsin K inhibitors. The described invention also includes methods of making such ketone derivs. as well as methods of using the same in the treatment of disorders, including osteoporosis. Although the methods of preparation are not claimed, 19 example preps. are included. Each of the compds. exemplified in the Examples section bind with high affinity ( $IC_{50} < 10 \mu M$ ) to the cathepsin K enzyme, e.g. (1S)-1-[[4-(1H-imidazol-1-yl)phenoxy]methyl]-2,2-dimethylpropyl (1S)-1-[[[(2-pyridinylsulfonyl)amino]acetyl]pentylcarbamate exhibits an  $IC_{50}$  of .apprx.10-1 nM or less. For I: A = (Q3)p-(Q2)n-(Q1)-(Q)m- (Q is CH<sub>2</sub> and m = 0-2, or Q is OCH<sub>2</sub> and m is 1, or Q is N(R<sub>3</sub>)CH<sub>2</sub> and m is 1, where R<sub>3</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl; Q<sub>1</sub> is aryl, heteroaryl, or heterocyclyl; Q<sub>2</sub> is CH<sub>2</sub> and n is 0 or 1, or Q<sub>2</sub> is O and n is 1, or Q<sub>2</sub> is N(R<sub>3</sub>) and n is 1, where R<sub>3</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl; Q<sub>3</sub> is aryl or heteroaryl and p is 0 or 1). R<sub>1</sub> is alkyl or cycloalkyl, said cycloalkyl may be optionally substituted with alkyl; D is O or S; R<sub>2</sub> is H or alkyl; and Z is -(X<sub>1</sub>)q-(X<sub>2</sub>) (X<sub>1</sub> is S(O)<sub>2</sub>, C(O), or -CH<sub>2</sub>-, and q = 0-2; and X<sub>2</sub> is aryl, heteroaryl, or heterocyclyl). For II: B is -(Q<sub>1</sub>)a-(Q<sub>2</sub>)b-(Q<sub>3</sub>) (Q<sub>1</sub> is C(O), S(O)<sub>2</sub>, or CR<sub>2</sub>R<sub>3</sub>, where R<sub>2</sub> and R<sub>3</sub> each = H or C<sub>1</sub>-C<sub>6</sub> alkyl, and a = 0-3; Q<sub>2</sub> is O, S, NR<sub>2</sub>, or CR<sub>2</sub>R<sub>3</sub>, where R<sub>2</sub> and R<sub>3</sub> each = H or C<sub>1</sub>-C<sub>6</sub> alkyl, and b = 0-3; and Q<sub>3</sub> is aryl, heteroaryl, heterocyclyl, aralkyl, or alkyleneheterocyclyl). R<sub>1</sub> is H or alkyl; Z is -(X<sub>1</sub>)q-(X<sub>2</sub>) (X<sub>1</sub> is S(O)<sub>2</sub>, C(O), or alkyl, and q is 0 or 1; and X<sub>2</sub> is aryl, heteroaryl, or heterocyclyl).

## REFERENCE COUNT:

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THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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INVENTOR(S): Wolfe, Michael S.; Selkoe, Dennis J.

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AU 2001081250	A5	20020225	AU 2001-81250	20010810
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398515-82-7P 398515-89-4P 398515-96-3P  
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